

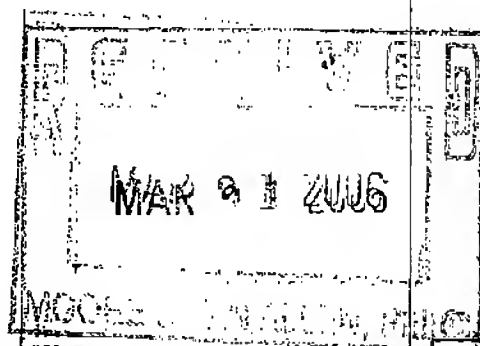
# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

# PCT

To:

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## NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing (day/month/year)		15.03.2006
Applicant's or agent's file reference U03-0123.113		<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/US2004/032657	International filing date (day/month/year) 05.10.2004	Priority date (day/month/year) 03.02.2004
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB		

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.


#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:   European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840	Authorized Officer  Geier, A  Tel. +49 30 25901-706
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## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference U03-0123.113		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/US2004/032657		International filing date (day/month/year) 05.10.2004		Priority date (day/month/year) 03.02.2004
International Patent Classification (IPC) or national classification and IPC H04N7/26				
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  12.05.2005		Date of completion of this report  15.03.2006		
Name and mailing address of the international preliminary examining authority:   European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840		Authorized Officer  Kontopodis, D  Telephone No. +49 30 25901-442  		

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-6 as originally filed

**Claims, Numbers**

1-8 received on 12.05.2005 with letter of 03.05.2005

**Drawings, Sheets**

1/2, 2/2 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify)*:
- ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify)*:
- ☐ any table(s) related to sequence listing *(specify)*:

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/US2004/032657

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	3,4,7,8
	No: Claims	1,2,5,6
Inventive step (IS)	Yes: Claims	
	No: Claims	1-8
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: WANG J Y A ET AL: "Applying mid-level vision techniques for video data compression and manipulation" PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING USA, vol. 2187, May 1994 (1994-05), pages 116-127, XP002316315 ISSN: 0277-786X

D2: YING LI ET AL: "Salient region detection and tracking in video" 2003 IEEE INTERNATIONAL CONFERENCE ON MULTIMEDIA AND EXPO, vol. 2, 6 July 2003 (2003-07-06), - 9 July 2003 (2003-07-09) pages 269-272, XP010650712

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of the independent claim 1 is not new in the sense of Article 33(2) PCT.

2.1 Document D1 discloses (the references in parentheses applying to this document):  
A method for reducing the bitrate of an image (chapters 2 - 3), said method comprising:

removing a portion of an original image frame that corresponds to the background portion of the image thereby creating dead clusters within the image frame (page 118, figure 2);

filling the dead clusters of the removed portion of the image frame with black or white data to create a new image frame having a smaller bitrate than the original image frame (page 121, chapter 3, lines 9-10; setting the luminance value to zero is equivalent to filling with black data);

encoding the new image frame such that it requires less bandwidth during transmission than the original image frame would require (page 121, chapter 3.1, lines 1-5); and

transmitting the encoded new image frame (e.g. chapter 2, line 3).

2.2 Claim 1 mentions that the method "enables a mobile phone to reduce the bitrate...",

whereby the applicant, in his letter dated 03.05.2005, argues that the claims provide "a specific use and/or application of a generic background image removal algorithm". However, claim 1 relates to a method, whereby the fact that it is used in a mobile phone is not a feature of the method. Therefore, the mobile phone may not be seen as limiting the scope of the claim, and the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

- 2.3 Moreover, even if the claim disclosed the use of the known algorithm in a mobile phone, an inventive step objection would be raised, because such a use would be obvious to the person skilled in the art (Article 33(3) PCT).
3. Furthermore, the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of the independent claim 1 is not new in the sense of Article 33(2) PCT.
  - 3.1 Claim 5 is an apparatus corresponding to the method of claim 1. Therefore, claim 5 is not new in the sense of Article 33(2) PCT.
  - 3.2 Claim 5 mentions that the apparatus "enables a mobile phone to reduce the bitrate...". Although a mobile phone is not mentioned in D1, the disclosed technique is suitable for reducing a bitrate of an image to be transmitted from any transmitting device, including mobile phones. Since the mobile phone is not a feature of the apparatus in claim 5, it is also not limiting to the scope of the claim. Moreover, even if the claim included the mobile phone, an inventive step objection would have been raised, because such a combination of features would be obvious to the person skilled in the art (Article 33(3) PCT).
4. Dependent claims 2-4 and 6-8 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1, D2 and the corresponding passages cited in the search report.

12.05.2005

(96)

## Claims:

1. A method that enables a mobile phone to reduce the bitrate of an image to be transmitted by the mobile phone, said method comprising:
  - removing a portion of an original image frame 360 that corresponds to the background portion of the image thereby creating dead clusters within the image frame;
  - filling the dead clusters of the removed portion of the image frame with black or white data 360 to create a new image frame having a smaller bitrate than the original image frame;
  - encoding the new image frame 370 such that it requires less bandwidth during transmission than the original image frame would require; and
  - transmitting 390 the encoded new image frame out of the mobile phone.
2. The method of claim 1 further comprising:
  - including a representation of the removed portion of the original image frame with the new image frame during transmission of the new image frame so that it may be utilized by the receiver to improve the presentation of the received image frame by integrating it back into the received image frame 390.
3. The method of claim 1 further comprising:
  - automatically determining whether there is a primary object centered in the original image frame prior to executing the bitrate reduction software application 340 on the original image frame; and
  - executing the bitrate reduction software application 340 if the original image is determined to contain a primary object centered in the image frame.
4. The method of claim 3 wherein automatically determining whether there is a primary object centered in the original image frame is achieved using a contour detection technique applied to the data in the image frame.
5. An apparatus that enables a mobile phone to reduce the bitrate of an image to be transmitted by the mobile phone, said method comprising:

means for removing a portion of an original image frame 360 that corresponds to the background portion of the image thereby creating dead clusters within the image frame;  
means for filling the dead clusters of the removed portion of the image frame with black or white data 360 to create a new image frame having a smaller bitrate than the original image frame;  
means for encoding the new image frame 370 such that it requires less bandwidth during transmission than the original image frame would require; and  
means for transmitting 390 the encoded new image frame out of the mobile phone.

6. The apparatus of claim 5 further comprising:  
means for including a representation of the removed portion of the original image frame with the new image frame during transmission of the new image frame so that it may be utilized by the receiver to improve the presentation of the received image frame 390.

7. The apparatus of claim 5 further comprising:  
means for automatically determining whether there is a primary object centered in the original image frame prior to executing the bitrate reduction software application 340 on the original image frame; and  
means for executing the bitrate reduction software application 340 if the original image is determined to contain a primary object centered in the image frame.

8. The apparatus of claim 7 wherein automatically determining whether there is a primary object centered in the original image frame is achieved using a contour detection technique applied to the data in the image frame.